UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,959	12/14/2001	Cary Lee Bates	ROC920010308US1	7522

7590 08/11/2005

Gero G. McClellan
Moser, Patterson & Sheridan, L.L.P.
Suite 1500
3040 Post Oak Boulevard
Houston, TX 77056-6582

EXAMINER	
KANG, INSUN	

ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/017,959	BATES ET AL.	
	Examiner	Art Unit	
	Insun Kang	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed 5/6/2005.

2. As per applicant's request, claims 1, 3-5, 7-15, 16-23, and 25-28 have been amended. Claims 1-28 are pending in the application.

Claim Rejections - 35 USC § 112

3. The rejection to claims 1-28 has been withdrawn due to the amendment to the claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bates et al. (US Pub. 2003/0061599) hereinafter referred to as "Bates" hereafter Bates in view of Sangavarapu et al. (US 2002/0073401) hereafter Sangavarapu.

Per claim 1:

Bates discloses:

-setting machine recognizable entry point in the code (page 2, 0027; page 5, 0050)

-setting machine recognizable exit point in the code wherein the entry point and the exit point define an entry and an exit, respectively, of the region (page 2, 0027; page 5, 0050) ;executing the code; entering the region by encountering the machine recognizable entry point during the execution (0023);

Bates does not explicitly teach determining whether the execution of the code exits the region of the code without firing the user-specified breakpoint.

However, Sangavarapu teaches such determination was known in the art of software development and debugging, at the time applicant's invention was made, to detect the missed breakpoint ("If the breakpoint is not there, a zombie breakpoint is identified and handled accordingly," page 2, 0043) such as those disclosed in Sangavarapu. It would have been obvious for one having ordinary skill in the art of software development and debugging to modify Bates' disclosed system to use Sangavarapu's method. The modification would be obvious because one having ordinary skill in the art would be motivated to prevent the breakpoint handler from incorrectly passing the "breakpoint back to the operating system, which treats the breakpoint as an unhandled exception (page 1, 0012)" as suggested by Sangavarapu.

Bates further discloses: exiting the region being determined by encountering the machine recognizable exit point during the execution and if so, halting the execution of the code ("If the condition is true, or if step 534 is answered negatively, processing proceeds to step 538 where any and all breakpoint counters of the range counter list 426 for the encountered breakpoint are incremented," 0050).

Per claim 2:

The rejection of claim 1 is incorporated, and further, Bates teaches:

- the user-specified breakpoint is a conditional breakpoint having an associated condition and wherein execution exits the region without firing the user-specified breakpoint because the associated condition is not satisfied (i.e. 0019).

Per claim 3:

The rejection of claim 1 is incorporated, and further, Bates teaches:

- encountering the user-specified breakpoint; suspending the execution of the code at the user-specified breakpoint; and in response to a user-specified run-to command received while execution of the code is suspended, executing the code until reaching the machine recognizable exit point of the region(i.e. 0019).

Per claim 4:

The rejection of claim 1 is incorporated, and further, Bates teaches:

- the user-specified breakpoint is a non-conditional breakpoint and wherein execution exits the region without firing the user-specified breakpoint because the user-specified breakpoint is not encountered (i.e. 0019; 0045).

Per claim 5:

The rejection of claim 1 is incorporated, and further, Bates teaches:

- prior to determining: setting an internal safety net entry breakpoint in the code relative to an entry point of the region; and setting a safety net exit breakpoint in the code (i.e. 0048)

Per claim 6:

The rejection of claim 5 is incorporated, and further, Bates teaches:

- setting the internal safety net entry breakpoint and setting the safety net exit breakpoint are performed automatically in response to a user selection of the region (i.e. 0048).

Per claim 7:

The rejection of claim 5 is incorporated, and further, Bates teaches:

- setting the safety net exit breakpoint is performed automatically in response to encountering the internal safety net entry breakpoint (i.e.0048).

Per claim 8:

The rejection of claim 5 is incorporated, and further, Bates teaches:

- the machine recognizable entry point and the machine recognizable exit point are determined by a compiler (i.e. 0023).

Per claim 9:

The rejection of claim 1 is incorporated, and further, Bates teaches:

- wherein halting comprises encountering a safety net breakpoint located in the code relative to the machine recognizable exit point (i.e. 0051, 0048, 0050).

Per claim 10:

The rejection of claim 9 is incorporated, and further, Bates teaches:

- the machine recognizable entry point and the machine recognizable exit point are determined by a compiler (i.e. 0051, 0048, 0050).

Per claims 11-19, they are the computer readable medium versions of claims 1, 3, and 4-10, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1, 3, and 4-10 above.

Per claims 20-28, they are the system versions of claims 1, 3, and 4-10, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1, 3, and 4-10 above.

Response to Arguments

6. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Therefore, this action is made non-final.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-F 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

I. Kang
8/5/2005
IK

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100